Supplementary Material

When Do Different Systems of Government Lead to Similar Power-Sharing? The Case of Government Formation

Thiago Nascimento da Silva

A Testing Gamson's Law in Parliamentary and Presidential Democracies

The proportional distribution of ministerial portfolios, known as Gamson's Law (1961), suggests that coalition parties should receive shares of portfolios proportional to the share of legislative seats they contribute to the coalition. The equation to test Gamson's Law can be expressed as:

$$p_i = \alpha + \beta s_i + u_i \tag{1}$$

Where p_i is the share of portfolios coalition party i receives from the total of available portfolios (i.e., the number of cabinet portfolios controlled by coalition party i divided by the total number of available portfolios in the cabinet); s_i is the share of legislative seats coalition party i contributes to the coalition government when the cabinet is appointed (i.e., the number of legislative seats coalition party i brings to the coalition government divided by the total number of legislative seats controlled by the coalition government); u_i is the error term, and; α and β are parameters to be estimated. A perfect proportionality in portfolio allocation—Gamson's Law—implies that, from the above equation, β should equal one, while α should be zero.

The standard method of testing Gamson's Law is to conduct an ordinary least squares regression (OLS) of the share of portfolios coalition parties control (their *portfolio share*) on the legislative seat share that coalition parties contribute to the coalition government (their *seat share contribution*). Table A.1 presents the relationship between these variables in parliamentary and presidential systems of government. The expectations are 1. the translation of seat share contribution into portfolio share should occur in a more proportional fashion in parliamentary systems than in presidential systems, and; 2. on average, the formateur's advantage should be greater in presidential systems than in parliamentary systems.

As expected, the results from the Gamson's Law models indicate that seat share contribution is translated in portfolio share in a more proportional fashion in parliamentary systems. A $\beta = 0.84$ in Model 1 of Table A.1 and a $\beta = 0.66$ in Model 2, both statistically significant at level 0.01, suggest that the link between an increase in *seat share contribution*

Table A.1: Testing Gamson's Law and the *Formateur*'s Advantage

	Gamson's Law		Formateur's Advantage	
	Model 1 (Parliamentary)	Model 2 (Presidential)	Model 3 (Parliamentary)	Model 4 (Presidential)
Seat Share Contribution (%)	0.843***	0.661***	0.814***	0.446***
	(0.009)	(0.024)	(0.013)	(0.027)
Formateur			0.022***	0.182***
			(0.007)	(0.014)
Intercept	0.052***	0.025**	0.055***	0.041***
	(0.004)	(0.010)	(0.004)	(0.009)
N	807	656	807	656
R^2	0.91	0.53	0.91	0.63
RootMSE	0.065	0.146	0.064	0.130

Notes: In Model 1, Gamson's Law is tested across parliamentary democracies using Warwick and Druckman's data (2006), comprising 807 observations at the coalition party level as the unit of analysis, from cabinets formed across 14 European countries from 1945 to 2000. In Model 2, Gamson's Law is tested in presidential democracies using new data at the coalition party level as well from 20 presidential cabinets formed over more than 70 years (1946-2019), comprising 656 observations. Model 3 and Model 4 present the results for testing the formateur's advantage in parliamentary systems and presidential systems, respectively.

Dependent variable: Portfolio Share (%). Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. The hypotheses tests for the *Intercept* and *Formateur* are: *Null hypothesis:* $\alpha = 0$; *Alternative hypothesis:* $\alpha \neq 0$. The hypotheses tests for *Seat Share Contribution* are: *Null hypothesis:* $\beta = 1$; *Alternative hypothesis:* $\beta \neq 1$.

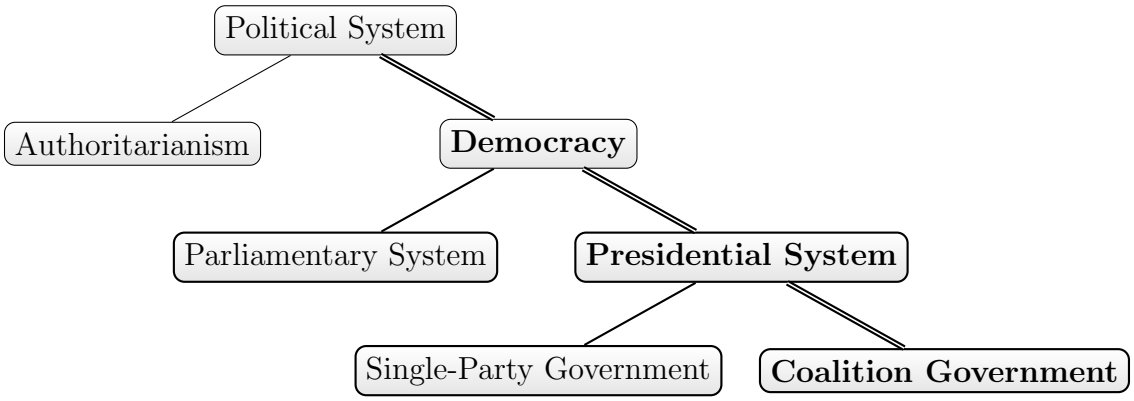
and an increase in *portfolio share* is weaker in presidential democracies. The models to test the formateur's advantage (Model 3 and Model 4) include a binary variable *formateur*, identifying the party that forms the government. While in parliamentary democracies the formateur party seems to receive a small bonus in the allocation of portfolios (with a significant coefficient equal to 0.02, or an increase of 2% in portfolio share), the formateur in presidential systems tends to receive a much greater bonus in the portfolio allocation process. On average, the formateur status seems to give the formateur's party a bonus in *portfolio share* nine times larger (an increase of 18% in portfolio share) in presidential systems than in parliamentary systems (compare Models 3 and 4).

An R^2 of 0.53 in Model 2 of Table A.1 (compared to the value of 0.91 for the R^2 in Model 1) suggests that something else, besides *seat share contribution*, could explain the variance in *portfolio share*. Adding the formateur status into Model 2 of Table A.1 increases the R^2 to 0.63 (Model 4). Although a higher R^2 is achieved, there remains significant variance in the *formateur advantage* model for presidential democracies to be explained.

B Presidential Systems Database

Figure A1 below depicts the three main criteria countries must fulfill to be included in the main empirical analyses of this study. The double lines in the diagram indicate that only *democracies* are considered in this study; within democratic political systems, the focus is on *presidential systems of government*, and; within presidential systems of government, only *coalition governments* are considered. The cases to be included in the analyses are justified by the definition of each of these concepts and on data availability.

Figure B.1: Criteria for Being Included in the Database



For the classification of a democratic political system, I use the definition suggested by Przeworski et al. (2000), and further developed by Cheibub, Gandhi and Vreeland (2010, p. 69):

1. The chief executive must be chosen by popular election or by a body that was itself popularly elected;

2. The legislature must be popularly elected;

3. There must be more than one party competing in the elections, and;

4. An alternation in power under electoral rules identical to the ones that brought the incumbent to office must have taken place.

This classification has the advantages of being comprehensive on classifying worldwide political regimes in a minimalist way, related to the particular research question that is being addressed in this study (as suggested by Collier and Adcock (1999)), and, in practice,

this classification is strongly correlated with other common measures of democracy such as those developed by the Freedom House (2020) and the Polity IV Project (Marshall, Gurr, and Jaggers 2019).

Presidential systems are defined according to the commonly-used concept developed by Shugart and Carey (1992, pp. 19–20):

1. The chief executive is elected by popular vote or by a body that was itself popularly elected;

2. The terms of the chief executive and the assembly are fixed, and are not contingent on mutual confidence;

3. The chief executive selects and removes the members of the cabinet, and;

4. The chief executive has some constitutionally-granted lawmaking authority such as veto power.

Finally, I adopt a minimalist definition for coalition government: a coalition government is present when at least two parties hold cabinet portfolios. The criterion to define the demarcation of the start and the end of a coalition is also very straightforward: Any changes in the set of parties holding cabinet membership. Following Laver and Schofield (1990, p. 129) it is important to distinguish two kinds of coalitions: a government (portfolio) coalition, i.e., a set of parties that receive ministerial portfolios and formally support the government, and; a legislative coalition—i.e., a set of parties that ensure votes for the government in congress in order to approve the president's agenda. These coalitions can be the same, but not necessarily so. Parties can support the president in the legislative branch even if they do not hold cabinet portfolios. Thus, in this study, I am concerned only with coalition governments, i.e., governments composed of the formateur's political party—i.e., the party that forms the government (which is always the presidential party in presidential systems)—and all parties that accept the ministerial posts offered by the formateur, whether these parties support the government in the legislature or not.

In total, 20 countries fulfill these criteria covering an unbalanced times-series cross-sectional data over 73 years (1946-2019). The countries and years covered in the analyses

are listed in Table A1.

Table B.1: List of Countries and Years Covered

ID	Country	Years Covered
1	Argentina	2000, 2001, 2002
2	Bolivia	1985, 1989, 1991, 1992, 1993, 1994, 1997, 1999, 2001, 2002
3	Brazil	1946, 1947, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1960, 1961, 1962, 1986, 1988, 1989, 1990, 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2019
4	Burundi	2005, 2007, 2010
5	Chile	1990, 1992, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, 2010, 2011, 2012, 2013, 2014, 2015, 2018
6	Colombia	1978, 1980, 1982, 1983, 1984, 1985, 1990, 1991, 1992, 1993, 1994, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2005, 2006, 2007, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
7	Ecuador	1984, 1986, 1987, 1988, 1992, 1993, 1994, 1996, 1997, 2002, 2004
8	El Salvador	2000, 2003, 2009, 2012, 2014
9	Ghana	2001
10	Honduras	1982, 1984, 1985, 1990, 1993, 1994, 2000, 2002, 2009, 2010
11	Indonesia	2005, 2006, 2007, 2009, 2011, 2012, 2013
12	Kenya	2003, 2004, 2008, 2009, 2014
13	Malawi	1994, 2004, 2005, 2007, 2009, 2011, 2014
14	Panama	1995, 1998, 1999, 2009, 2012, 2013, 2014
15	Paraguay	1999, 2000, 2001, 2003, 2008, 2009, 2011, 2012
16	Peru	1980, 1981, 1982, 1983, 1990, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2009, 2010
17	Philippines	2007, 2008, 2009, 2010
17	Sierra Leone	2008, 2009, 2010
19	Uruguay	1985, 1986, 1988, 1989, 1990, 1991, 1992, 1994, 1995, 1996, 1999, 2000, 2001, 2003, 2004
20	Venezuela	1961, 1962, 1963, 1965, 1966, 1967, 1992, 1994, 1995, 1996, 1997, 1999, 2001, 2002

The unit of analysis in this study (i.e., each row of the data) is the coalition party. As described above, a coalition party is defined according to whether a party holds a cabinet membership—that is, if the party controls at least one portfolio. As these data are considered annually, years without changes in the coalition composition were excluded, to avoid repetitions in the dataset. If two cabinets are formed in the same year, only the cabinet that lasted longer during the year is considered in the analysis. Portfolios held by independent (non-partisan) ministers are dropped from the data-set and not considered in the calculation of portfolio share. The decision to drop independent ministers also precludes potential issues in the analyses caused by data on portfolio allocation having a

compositional structure (Indridason 2015; Lipsmeyer et al. 2017).

The data comprise a total of 117 unique governing parties (among those, 48 unique presidential parties), totaling 656 observations. This is the most comprehensive data set on coalition governments in presidential systems collected to date. The final database and the variables used in the analyses were constructed by the author from several sources as described below.

Portfolio Share. The dependent variable of the main analysis of this study indicates the percentage of ministerial posts (portfolios) coalition parties (formateur and governing parties) held from the total number of portfolios available, when the coalition is formed by the president. These data were mostly gathered from the "Political Handbook of the World Series (PHW) (2018)," "Economist Intelligence Unit (EIU) (2018)," Keesing's World News Archive (2018), and the Presidential Cabinet Project (PCP) (Camerlo and Martínez-Gallardo 2018).

The annual PHW (2018) covers significant political events, including cabinet composition worldwide.[1] The PHW data for the 1998-2019 period were retrieved online at https://library.cqpress.com/phw/. The PHW data for early years were retrieved from the PHW books by the author. The PHW cabinet data were expanded and updated by the author using the quarterly Country Reports published by the EIU (2018), available online at http://www.eiu.com. The EIU provides data on cabinet composition for the 1996-2019 period. The resulting data on cabinet composition were lastly checked and updated based on the information from the PCP (Camerlo and Martínez-Gallardo 2018). The PCP country data were acessed at https://dataverse.harvard.edu/dataverse/prescab, and were collected by a large group of researchers as follows: Argentina (Camerlo and Coutinho 2019), Brazil (Inácio 2019), Colombia (Mejía Guinand and Botero 2019), Chile (Avendaño and Dávila 2019), Ecuador (Basabe-Serrano et al. 2019), Peru (Vera, Carreras, and Incio 2019), and Uruguay (Chasquetti and Buquet 2019). When cabinet composition information was missing from PHW, EIU, and PCP databases, the author updated the data searching for world news at http://keesings.com (Keesing's World News Archive 2018).

[1] Although the "Political Handbook of the World Series" normally publishes annual reports, 1982-1983 and 1984-1985 were biennial reports.

Lastly, data on African presidential systems were updated from Ariotti and Golder (2018). Data from Amorim Neto (2006a) and Martínez-Gallardo (2012) were also used to double-check entries on the resulting database. When conflict between information on cabinet composition was encountered, the author followed the information provided by PHW, EUI, PCP, and Keesings, in that order.

Seat Share Contribution. The data on the percentage of legislative seats coalition parties contribute to the total number of legislative seats held by the coalition were gathered from Nohlen (2005; 2005), and updated to include more recent legislatures using data from the "Inter-Parliamentary Union (IPU) (2018)," "Psephos: Adam Carr's Election Archive (2019)," and several national electoral resources such as countries' electoral court websites. Data provided by Argelina Figueiredo via CEBRAP (2019) were particularly instrumental to confirm and update the Brazilian legislative data.

Presidential Power. The institutional power of the president index was sourced from Doyle and Elgie (2014).

Formateur. A dichotomous variable indicating the formateur status of the coalition party was generated assigning the value of 1 for the president's party, and the value of 0 otherwise. In a few cases, the president was not affiliated with any of the political parties and a value of 0 was assigned for all coalition parties. These cases were checked based on Nohlen (2005; 2005) and Psephos (2019). These sources were also used to generate the dichotomous control variables *electoral year*—with a value of 1 indicating an electoral year (either presidential or parliamentary elections), and 0 for non-electoral years—and *president majority*—where a value of 1 indicates the president's party alone holds the majority of legislative seats (*legislative seat share greater than fifty percent*), and 0 otherwise.

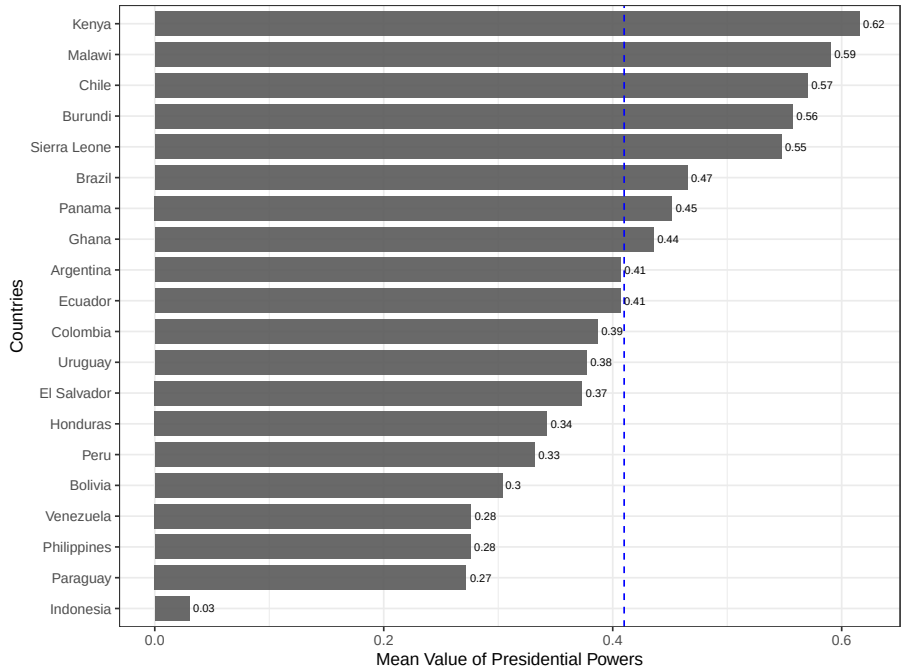
C Descriptive Statistics

Table C.1: Descriptive Statistics and Variables

	Mean	St. Dev.	Min	Max	N
Dependent Variable:					
Portfolio Share	0.25	0.21	0.03	0.95	656
Independent Variables:					
Presidential Power	0.41	0.14	0.03	0.62	656
Formateur	0.31	0.46	0	1	656
Seat Share Contribution	0.33	0.24	0.004	0.99	656
Control Variables:					
Electoral Year	0.40	0.49	0	1	656
President Majority	0.14	0.35	0	1	656

D Distribution of the Variable *Presidential Power*

Figure D.1: Distribution of *Presidential Power* Across Presidential Democracies (Average Values)



Note: The dashed blue line depicts the average value across the countries considered, 0.41.

E Main Results

Table E.1: The Effect of Presidential Power on the Formateur's Portfolio Share

	(Model 1) Benchmark Model	(Model 2) With Controls	(Model 3) With Country and Year Fixed-Effects	(Model 4) With Country, Year and Government FE
Seat Share Contribution	0.452***	0.443***	0.409***	0.423***
	(0.027)	(0.027)	(0.029)	(0.030)
Formateur	0.098***	0.095**	0.089**	0.073**
	(0.037)	(0.037)	(0.037)	(0.036)
Presidential Power	0.055	0.055	0.077	−0.283
	(0.042)	(0.042)	(0.195)	(0.849)
Electoral Year		0.004	−0.0003	−0.023
		(0.010)	(0.012)	(0.019)
President Majority		0.033**	−0.002	−0.066
		(0.015)	(0.023)	(0.070)
Formateur × Presidential Power	0.206**	0.212**	0.234***	0.272***
	(0.084)	(0.084)	(0.083)	(0.083)
Constant	0.017	0.013	0.088	0.297
	(0.019)	(0.019)	(0.128)	(0.361)
N	656	656	656	656
R^2	0.639	0.642	0.712	0.760
RMSE	0.129	0.129	0.123	0.120

Notes: Dependent variable: Portfolio Share.
Standard errors in parentheses. Two-tailed test.
*p<0.1; **p<0.05; ***p<0.01

F Single-Party Governments

In the main text of the revised manuscript I kept my analysis on the coalition governments only. The exclusions of single-party governments reflect my theoretical focus on the allocation of portfolio benefits among coalition parties, and make my results more comparable to evidence provided by the literature on coalition government formation both in parliamentary (Warwick and Druckman 2006; Golder and Thomas 2014) and presidential democracies (Amorim Neto 2006b; Ariotti and Golder 2018; Batista 2018; Camerlo and Martínez-Gallardo 2018).

As a further robustness check, I conduct my original models keeping single-party governments in the dataset and adding a control variable identifying this type of government (see Table F.1 below). Model 1 in Table F.1 presents the original model of my main analysis using coalition governments only. In Model 2, I keep single-party governments in the dataset and add a control variable "single-party government" to the model specification. The estimates for the variables present in both models are very consistent. These results increase the confidence in the main finding of the study: on average, the president's party receives a greater share of portfolios when presidents are institutionally powerful. Not surprisingly, the control variable "single-party government" is positive and significant, suggesting that, compared to coalition governments, the president's party receives more portfolios under single-party governments.

Table F.1: Original Model and Model Including Single-Party Governments

	(Model 1) Only Coalition Governments	(Model 2) With Single-Party Governments
Seat Share Contribution	0.409***	0.598***
	(0.029)	(0.028)
Formateur	0.089**	0.113***
	(0.037)	(0.035)
Presidential Power	0.077	−0.070
	(0.195)	(0.163)
Electoral Year	−0.0003	−0.003
	(0.012)	(0.011)
President Majority	−0.002	0.001
	(0.023)	(0.015)
Single-Party Government		0.100***
		(0.023)
Formateur × Presidential Power	0.234***	0.266***
	(0.083)	(0.080)
Constant	0.088	0.159
	(0.128)	(0.112)
N	656	831
R^2	0.712	0.899
RMSE	0.123	0.122

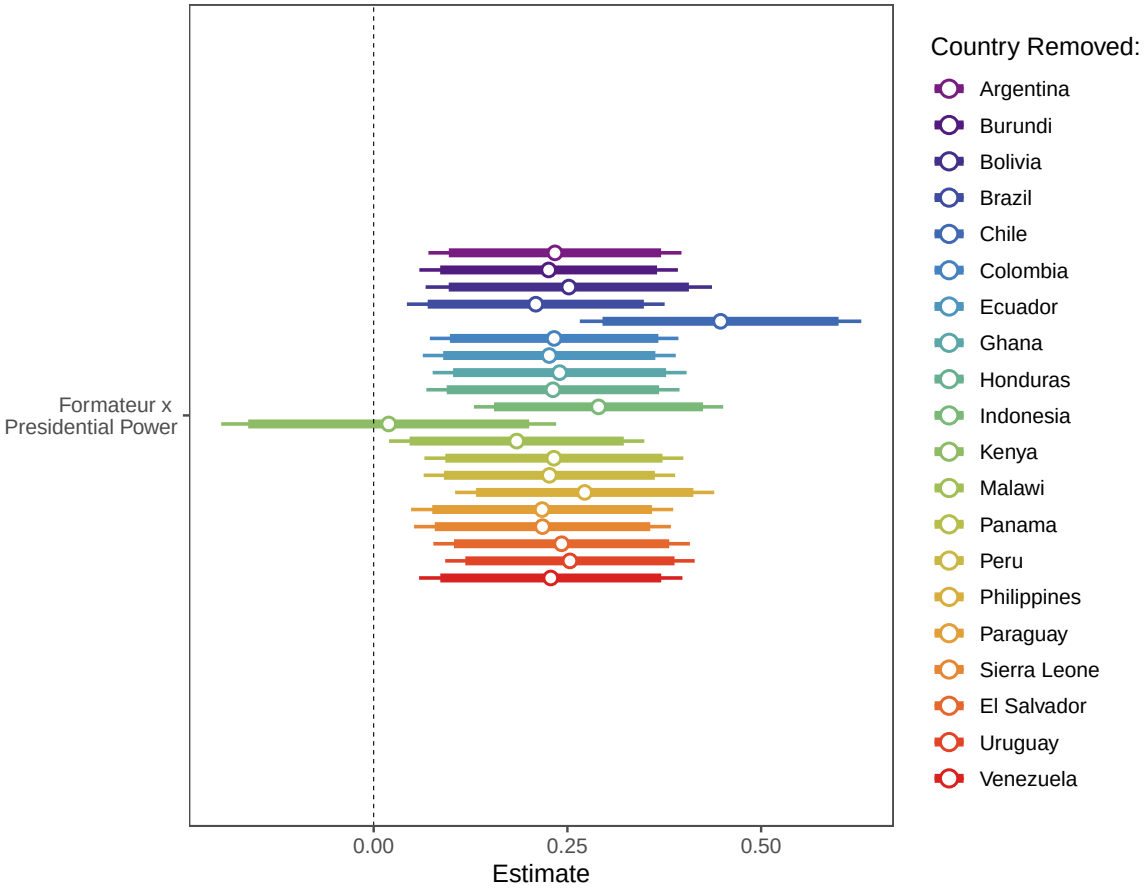
Dependent variable: Portfolio share.

Notes: Models conducted with country and year fixed-effects. Standard errors in parentheses. Two-tailed tests. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

G Extreme Values of Presidential Power

In this appendix, I test the validity and consistency of my results, examining more closely the influence of extreme values of my measurement of *presidential power* and influential observations in the estimates of my main statistical model. I start by conducting a robustness test removing one country at a time from my analysis. In Figure G.1, I plot the effect of the main estimate of interest—the interactive term between *formateur* and *presidential power*—on *portfolio share* by the process of removing one country from each model.

Figure G.1: Robustness Test: Removing One Country at a Time

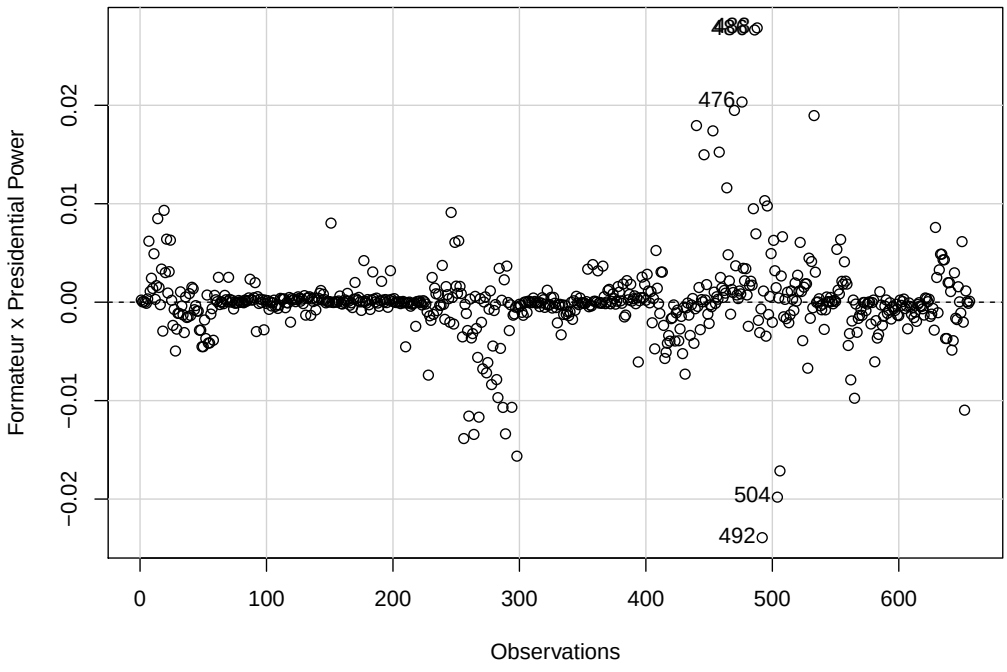


The estimates for the interactive term are mainly consistent in all models, with a positive and significant coefficient. The exception is for the model removing Indonesia from the analysis, leading to a consistent positive estimate but no longer significant. Among the countries considered in my study, Indonesia has the weakest presidency, with a score of 0.03 in presidential power. The extreme value coming from Indonesia needs to be considered in more detail before removing this case from the dataset. It is usually not acceptable to

drop an observation just because it has an extreme value on one variable or because it is shown to be an influential observation, particularly when we are dealing with a validly measured case (Neumayer and Plümper 2017).[2]

To better identify individual observations that are exerting an unusually high influence on the model, following Belsley, Kuh, and Welsch (2004), I compare the coefficient value when an observation is included in the regression model, versus the coefficient value when the same observation is excluded. This can be generated by computing DFBETA influence statistics for each individual observation for each variable in our model. Because we are interested in observations with greater influence on the estimation of the interactive term between *formateur* and *presidential power*, in Figure G.2 I display the index plot of DFBETAS for this coefficient of interest.

Figure G.2: DFBETAS for the Estimation of the Interactive Term Between *Formateur* and *Presidential Power*



[2]The legislative powers of the Indonesian presidency have been dramatically reduced since the democratization of the country at the end of the 20th century. Among the series of constitutional reforms (1999–2002) put forward by the Indonesian People's Consultative Assembly, it was established the end of the presidential veto, the need for parliamentary agreement for the appointment of members to independent administrative organizations such as the central bank, and strong restrictions on the president's right to establish a law, revise the state budget, and to propose national referendums (Kawamura 2013).

In Figure G.2, large values of DFBETAS are indicated, labeling observations that are influential in estimating the coefficient of interest. The cases are listed in Table G.1. Three influential observations are from Kenya, one influential observation is from Indonesia, and one from Malawi.

Table G.1: DFBETA: Influental Observations

Obs.	Country (Year)	DFBETA
488	Kenya (2009)	0.337
486	Kenya (2008)	0.334
476	Indonesia (2013)	0.319
504	Malawi (2009)	-0.240
492	Kenya 2014	-0.288

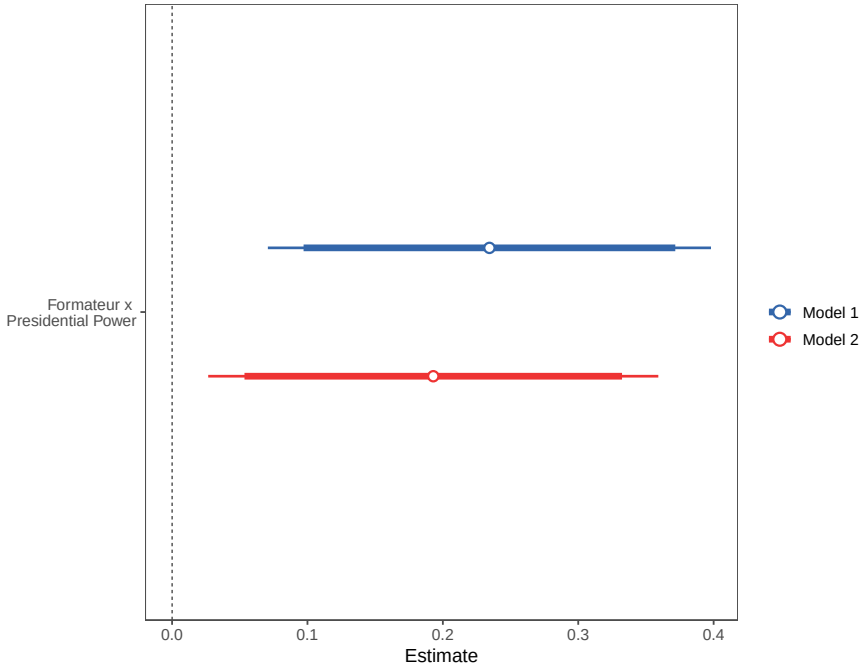
I then compare the results from my original model to a model conducted without these identified influential observations. In Figure G.3, I depict the estimates for the interactive term of interest. The estimate for the model removing the influential observations from the analysis is consistent to the original model, resulting in a positive and significant coefficient (at 90% and 95% confidence levels); increasing our confidence in the main finding of the study that, on average, a greater share of portfolios to the benefit of the president's party is observed when the policy-making power of the president increases.

A further test of the robustness of my results is provided by the conduction of a robust regression, an estimation method to handle potential outliers and high leverage observations in linear regression models. The intuition behind the robust regression is a process of iterated re-weighted least squares (IRLS), in which observations with large residuals tend to be down-weighted (for more detail on robust regression, see Li 1985; Fox 1997; Andersen 2008).

For the weighting function to be used for IRLS in the robust regression, I am using the standard Huber weighting, where observations with small residuals receive a weight of 1, and the larger the residual, the smaller the weight (Huber and Ronchetti 2009).

As we can see in Table G.2 below, the results from the original OLS model and the robust regression are very consistent—both in terms of coefficient magnitude and statistical significance—increasing our confidence in the reliability of the results of the study. In particular, the coefficient for the interactive term between *formateur* and *presidential*

Figure G.3: Estimate for the Interactive Term Between *Formateur* and *Presidential Power* in the Original Model (Model 1) and the Model Without the Identified Influential Observations (Model 2)



power has a greater magnitude in the robust regression in comparison to the original OLS model.

Table G.2: Comparing the Results from the Original OLS Model and the Robust Regression

	Original OLS	*Robust Regression*
Seat Share Contribution	0.409***	0.400***
	(0.029)	(0.025)
Formateur	0.089**	0.058*
	(0.037)	(0.032)
Presidential Power	0.077	−0.015
	(0.195)	(0.171)
Electoral Year	−0.0003	0.001
	(0.012)	(0.011)
President Majority	−0.002	0.012
	(0.023)	(0.020)
Formateur × Presidential Power	0.234***	0.330***
	(0.083)	(0.073)
Constant	0.088	0.106
	(0.128)	(0.112)
N	656	656
R^2	0.712	
RMSE	0.123	0.087

Notes: Dependent variable: Portfolio Share.
Model specified with country and year fixed-effects.
Due to the IRLS process, R^2 is not meaningful in robust regression.
Standard errors in parentheses. Two-tailed test.
*p<0.1; **p<0.05; ***p<0.01

H Portfolio Salience

Portfolios are not all the same. They vary in their political prestige, policy influence, size, and patronage and budget control (Warwick and Druckman 2001; Warwick and Druckman 2006; Escobar-Lemmon and Taylor-Robinson 2005; Batista 2016). These differences affect the parties' evaluations of the importance of different portfolios according to their interests and which ministerial posts would give them higher payoffs. Taking into consideration the varying levels of salience of the portfolios rather than just their numbers would be an important refinement for my theory and analysis. However, we lack comprehensive comparative data on portfolio salience for presidential democracies. While the numbers of portfolios allocated to each of coalition members can be easily determined, the measurement of salience of each of these portfolios and the payoffs different political parties attribute to them is an entirely different matter, and only very recently have systematic attempts been made in this direction in studies of presidential democracies (Batista 2017; Batista 2018; Mauerberg Jr. and Pereira 2020). An important limitation of these studies is the restriction in the classification of portfolios according to their salience to one case study only (mainly, Brazil).

One possibility would be to apply the salience scores developed for Brazilian portfolios to other countries. The problem with this strategy is the lack of more refined information about the composition of executive cabinets. The data for African presidential democracies, for example, extracted from Ariotti and Golder 2018, have information on the number (and percentage) of portfolios controlled by each African political party, but do not inform the names of portfolios each party controls. Another complication is that when this refined information is available—e.g., data on Latin American presidential cabinets provided by Camerlo and Martínez-Gallardo 2018—the list of distinct portfolios that have appeared over the course of the observation period are commonly large and contain substantial variation. Governments create, merge, or dissolve portfolios from time to time. For example, the portfolio of culture may have been a separate portfolio within a country for a while, combined with leisure later, and then subsequently split and added to sport, and so forth; making the generation of a cross-national salience measurement of a core list of portfolios

even more complex.

The estimation of salience for all portfolios across the 20 countries analyzed in my empirical analysis is, therefore, much beyond the scope of this study. As an alternative, based on the gathering of new data from countries' official government websites, I identify the party holding the ministry of finance in all countries analyzed in my study.[3] Similar to parliamentary systems, where the ministry of finance is usually considered the most-important portfolio (after the prime minister post) (see, for instance, Warwick and Druckman 2001; Warwick and Druckman 2006), recent studies on presidential portfolios are unanimous in listing the ministry of finance as the preeminent post. Either from the perspective of political importance based on surveys with legislators (Mauerberg Jr. and Pereira 2020), or the influence it gives to the party in terms of policy, office, or budget control (Martínez-Gallardo 2010; Batista 2017), the ministry of finance is considered the most-important ministerial post to be allocated by presidents in presidential democracies.

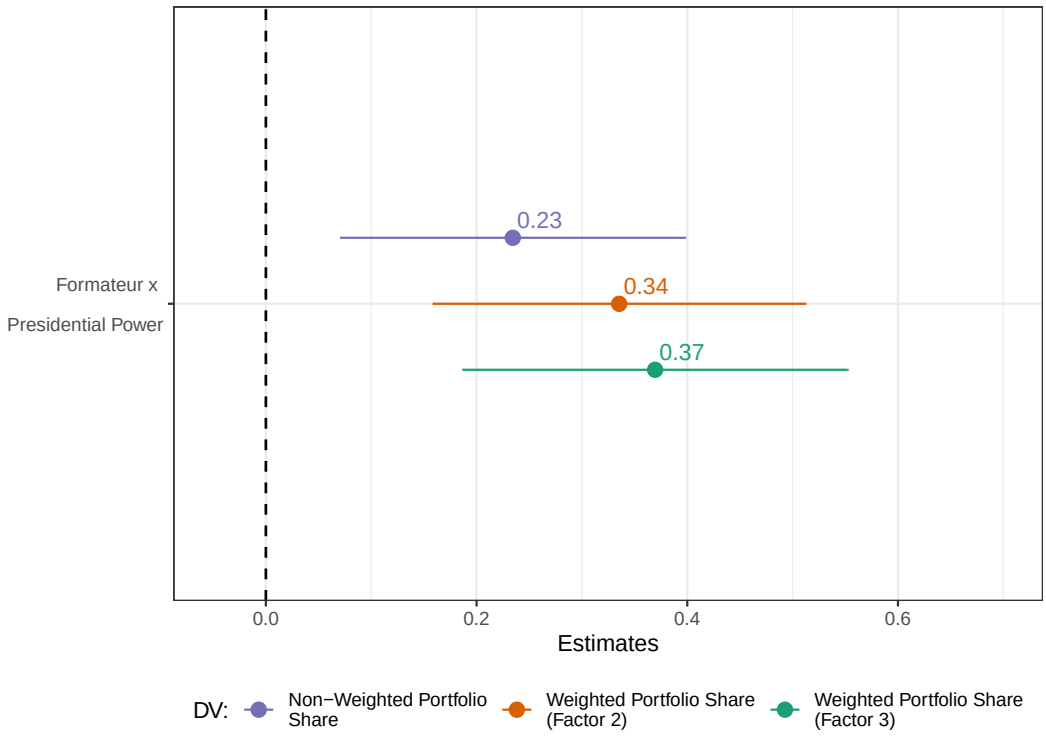
Analyzing the role that individual ministers play in the policy-making process in Latin American presidential democracies, Martínez-Gallardo 2010 stresses the centrality of the finance minister in the policy-making process across the region. Ministers of finance dominate the budget process and exert a prominent role in their country's economic direction, making their position essential to the president's political and economic goals (Martínez-Gallardo 2010, p. 135).

Building on common strategies to weight portfolios (Warwick and Druckman 2001; Warwick and Druckman 2006), I opted for a simple measurement of salience, adding cardinal weights to the relative prestige of the ministry of finance by doubling or tripling its importance in comparison to other portfolios. To keep the weighted dependent variable bounded between 0 and 1 without including these values (otherwise non-governing parties or single-party governments would be included in the analysis), I further reduced the values of other portfolios accordingly. Consider, for example, a cabinet with 10 ministerial posts and a portfolio distribution in which party A and party B hold an equal number of posts, such as five portfolios each. In the unweighted measurement, the share of portfolios allocated to each party would be 50%. Now consider that party B controls the ministry

[3]Data for the ministry of finance for Brazil's first democratic period (1945-1964) were not available.

of finance, and we weight it to double its importance in comparison to other portfolios. Then, party A would hold 45% of the portfolio share within the cabinet, and party B 55%. Similarly, tripling the importance of the ministry of finance leads party A to hold 42% of the portfolio share within the cabinet, and party B 58%.[4]

Figure H.1: Weighted Portfolio Share
(Increasing the Importance of the Ministry of Finance)



Notes: 95% confidence level. A full regression report can be viewed in Table H.1.

Figure H.1 depicts the effects of a powerful president on the distribution of portfolios by unweighted and weighted portfolio share, i.e, increasing the importance of the ministry of finance by a factor of two or three. The estimates for the weighted measurements of portfolio allocation presented in Figure H.1 suggest that strong presidents have an

[4]This weighting strategy is not without its shortcomings, one obvious limitation being that, in seeking a single salience weight for the ministry of finance, I assume its score to be fixed for all parties and without variation over time, and assign the same weight for all other portfolios. It may also be that the ministry of finance is being under-valued relative to other portfolios. The possibility that the ministry could be under-weighted is by no means far-fetched; after all, apart from elevating it as the top and most important post, I gave it no special consideration. It is highly probable that the ministry of finance is worth a good deal more than doubling its importance, but how much more? The available data cannot answer this question in any definitive sense, but the strategy provided here does allow us to explore a particularly interesting scenario for the first time; that is, the allocation of portfolios taking into account the weight of the most-important post across all presidential democracies forming coalition governments.

advantage in the allocation of portfolios that is not only quantitative (in terms of numbers), but also qualitative (i.e., controlling the most important portfolio). However, as indicated by the overlapping confidence intervals (at 95% level), this result is far from conclusive. In other words, weighting the ministry of finance as at least three times more salient than other portfolios does not lead to an estimate statistically different from the unweighted measurement. In substantive terms, how much more salient the ministry of finance is to other portfolios can only be guessed at this point. Salience weight above a factor of 3 would increase the leaps of faith that we will have to embrace to see potential differences in these results.

Table H.1: Robustness Test: Weighted Portfolio Share (Increasing the Importance of the Ministry of Finance)

	Dependent variable:	
	Weighted Portfolio Share (Factor 2)	Weighted Portfolio Share (Factor 3)
Seat Share Contribution	0.544***	0.527***
	(0.033)	(0.034)
Formateur	0.117***	0.109***
	(0.040)	(0.041)
Presidential Power	−0.057	−0.087
	(0.213)	(0.220)
Electoral Year	−0.007	−0.009
	(0.014)	(0.014)
President Majority	0.003	0.002
	(0.026)	(0.027)
Formateur × Presidential Power	0.335***	0.369***
	(0.090)	(0.093)
Constant	0.082	0.081
	(0.141)	(0.146)
N	611	611
R^2	0.779	0.766
RMSE	0.132	0.137

Notes: Standard errors in parentheses. Two-tailed test.
*p<0.1; **p<0.05; ***p<0.01

Supplementary Material: References

Amorim Neto, Octavio (2006a). *Presidencialismo e Governabilidade nas Américas*. Rio de Janeiro: FGV; Konrad Adenauer Stiffung.

Amorim Neto, Octavio (2006b). "The Presidential Calculus: Executive Policy Making and Cabinet Formation in the Americas". *Comparative Political Studies* 39.4, pp. 415–440.

Andersen, Robert (2008). *Modern Methods for Robust Regression*. Thousand Oaks: Sage Publications.

Ariotti, Margaret H. and Sona Golder (2018). "Partisan Portfolio Allocation in African Democracies". *Comparative Political Studies* 51.3, pp. 341–379.

Avendaño, Octavio and Mireya Dávila (2019). *PresCab_BASIC_Chile (2019) - Presidential Cabinets Project*. Version V3. DOI: 10.7910/DVN/PMWYI5. URL: https://doi.org/10.7910/DVN/PMWYI5.

Basabe-Serrano, Santiago et al. (2019). *PresCab_BASIC_Ecuador (2019) - Presidential Cabinets Project*. Version V2. DOI: 10.7910/DVN/WZZQJE. URL: https://doi.org/10.7910/DVN/WZZQJE.

Batista, Mariana (2016). "O Poder no Executivo: Explicações no Presidencialismo, Parlamentarismo e Presidencialismo de Coalizão". *Revista de Sociologia e Política* 24.57, pp. 127–155.

Batista, Mariana (2017). "Taking Portfolios Difference Seriously: A Composite Measure Based on Policy, Office, and Budget in Brazil". *Brazilian Political Science Review* 11.1, pp. 1–28.

Batista, Mariana (2018). "Who Gets What and How Does It Matter? Importance-Weighted Portfolio Allocation and Coalition Support in Brazil". *Journal of Politics in Latin America* 10.3, pp. 99–134.

Belsley, David, Edwin Kuh, and Roy Welsch (2004). *Regression Diagnostics: Identifying Influential Data and Sources of Collinearity*. Hoboken: Wiley-Interscience.

Camerlo, Marcelo and María Eugenia Coutinho (2019). *PresCab_BASIC_Argentina (2019) - Presidential Cabinets Project*. Version V2. DOI: 10.7910/DVN/3S2WVB. URL: https://doi.org/10.7910/DVN/3S2WVB.

Camerlo, Marcelo and Cecilia Martínez-Gallardo, eds. (2018). *Government Formation and Minister Turnover in Presidential Cabinets: Comparative Analysis in the America*. New York: Routledge.

Carr, Adam (2019). *Psephos: Adam Carr's Election Archive*. http://psephos.adam-carr.net [Last accessed: December, 2019]. (Visited on 2019).

CEBRAP (2019). *Legislative Dataset of the Brazilian Center of Analysis and Planning (CEBRAP)*. http://neci.fflch.usp.br/taxonomy/term/234 [Last accessed: December, 2018].

Chasquetti, Daniel and Daniel Buquet (2019). *PresCab_BASIC_Uruguay (2019) - Presidential Cabinets Project*. Version V3. DOI: 10.7910/DVN/D0RX90. URL: https://doi.org/10.7910/DVN/D0RX90.

Cheibub, José Antonio, Jennifer Gandhi, and James Vreeland (2010). "Democracy and Dictatorship Revisited". *Public Choice* 143.1-2, pp. 67–101.

Collier, David and Robert Adcock (1999). "Democracy and Dichotomies: A Pragmatic Approach to Choices about Concepts". *Annual Review of Political Science* 2, pp. 537–565.

Doyle, David and Robert Elgie (2014). "Maximizing the Reliability of Cross-National Measures of Presidential Power". *British Journal of Political Science* 46.4, pp. 731–741.

Economist Intelligence Unit (2018). *The Economist Intelligence Unit (EIU), Country Reports*. http://www.eiu.com [Last accessed: December, 2018].

Escobar-Lemmon, Maria and Michelle Taylor-Robinson (2005). "Women ministers in Latin American Government: When, Where and Why?" *American Journal of Political Science* 49.4, pp. 829–844.

Fox, John (1997). "Extending Linear Least Squares: Time Series, Nonlinear, Robust, and Nonparametric Regression". *Applied regression analysis, linear models, and related models*. Thousand Oaks: Sage Publications. Chap. 14, pp. 369–437.

Freedom House (2020). *Freedom in the World: Country and Territory Ratings and Statuses, 1973-2020*. https://freedomhouse.org/report/freedom-world [Last accessed: January, 2020].

Gamson, William (1961). "A Theory of Coalition Formation". *American Sociological Review* 26.3, pp. 373–382.

Golder, Sona and Jacquelyn Thomas (2014). "Portfolio Allocation and the Vote of No Confidence". *British Journal of Political Science* 44.01, pp. 29–39.

Huber, Peter and Elvezio Ronchetti (2009). *Robust Statistics*. Hoboken: John Wiley & Sons.

Inácio, Magna (2019). *PresCab_BASIC_Brasil (2019) - Presidential Cabinets Project*. Version V1. DOI: 10.7910/DVN/G9JKMW. URL: https://doi.org/10.7910/DVN/G9JKMW.

Indridason, Indridi (2015). "Live for Today, Hope for Tomorrow? Rethinking Gamson's Law". *Working Paper, University of California, Riverside*, pp. 1–34.

Inter-Parliamentary Union (2018). *IPU Parline: Global Data on National Parliaments*. https://data.ipu.org [Last accessed: December, 2019].

Kawamura, Koichi (2013). "President restrained: Effects of parliamentary rule and coalition government on Indonesia's presidentialism". *Presidents, Assemblies and Policy-Making in Asia*. Ed. by Yuko Kasuya. London: Palgrave Macmillan, pp. 156–193.

Keesing's World News Archive (2018). *Keesing's World News Archive*. http://keesings.com [Last accessed: December, 2018].

Laver, Michael and Norman Schofield (1990). *Multiparty Government: The Politics of Coalition in Europe*. Ann Arbor: The University of Michigan Press.

Li, Guoying (1985). "Robust Regression". *Exploring Data Tables, Trends, and Shapes*. Ed. by David Hoaglin, Frederick Mosteller, and John Tukey. Hoboken: Wiley-Interscience, pp. 281–344.

Lipsmeyer, Christine S. et al. (2017). "Comparing Dynamic Pies: A Strategy for Modeling Compositional Variables in Time and Space". *Political Science Research and Methods*, pp. 1–18.

Marshall, Monty, Ted Robert Gurr, and Keith Jaggers (2019). "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2018". *Center for Systemic Peace*.

Martínez-Gallardo, Cecilia (2010). "Inside the Cabinet: The Influence of Ministers in the Policymaking Process". *How Democracy Works. Political Institutions, Actors, and Arenas in Latin American Policymaking*. Ed. by Ernesto Stein Carlos Scartascini and Mariano Tommasi. Washington, D.C.: Inter-American Development Bank, pp. 119–145.

Martínez-Gallardo, Cecilia (2012). "Out of the Cabinet: What Drives Defections From the Government in Presidential Systems?" *Comparative Political Studies* 45.1, pp. 62–90.

Mauerberg Jr., Arnaldo and Carlos Pereira (2020). "How Valuable Is a Presidential Cabinet? Measuring Ministries' Political Attractiveness in Brazil". *Latin American Politics and Society* 62.1, pp. 25–45.

Mejía Guinand, Luis Bernardo and Felipe Botero (2019). *PresCab_BASIC_Colombia (2019) - Presidential Cabinets Project*. Version V2. DOI: 10.7910/DVN/QPC6IV. URL: https://doi.org/10.7910/DVN/QPC6IV.

Neumayer, Eric and Thomas Plümper (2017). *Robustness Tests for Quantitative Research*. Cambridge: Cambridge University Press.

Nohlen, Dieter, ed. (2005a). *Elections in the Americas: A Data Handbook, Volume I: North America, Central America, and the Caribbean*. New York: Oxford University Press.

Nohlen, Dieter, ed. (2005b). *Elections in the Americas: A Data Handbook, Volume II: South America*. New York: Oxford University Press.

Political Handbook of the World Series (2018). *Political Handbook of the World Series, Country Reports from 1998 to 2017*. https://library.cqpress.com/phw/ [Last accessed: December, 2018].

Przeworski, Adam et al. (2000). *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. Cambridge: Cambridge University Press.

Shugart, Matthew and John Carey (1992). *Presidents and Assemblies: Constitutional Design and Electoral Dynamics*. Cambridge: Cambridge University Press.

Vera, Sofia, Miguel Carreras, and José Incio (2019). *PresCab_BASIC_Peru (2019) - Presidential Cabinets Project*. Version V3. DOI: 10.7910/DVN/GERIJB. URL: https://doi.org/10.7910/DVN/GERIJB.

Warwick, Paul and James Druckman (2001). "Portfolio Salience and the Proportionality of Payoffs in Coalition Governments". *British Journal of Political Science* 31.04, pp. 627–649.

Warwick, Paul and James Druckman (2006). "The Portfolio Allocation Paradox: An Investigation into the Nature of a Very Strong but Puzzling Relationship". *European Journal of Political Research* 45, pp. 635–665.